SEQUENCE LISTING

<110> BioImage A/S

<120> AN IMPROVED METHOD FOR EXTRACTING
QUANTITATIVE INFORMATION RELATING TO AN INFLUENCE ON A
CELLULAR RESPONSE.

<130> 22129PC1

<160> 18

<170> FastSEQ for Windows Version 3.0

<210> 1
<211> 1788
<212> DNA
<213> Aequorea victoria and mouse

<220>
<221> CDS
<222> (1)...(1788)

<400> 1

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Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val
 1               5                  10                  15


aaa gag ttc cta gcc aaa gcc aag gaa gat ttc ctg aaa aaa tgg gaa      96
Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
             20                  25                  30


gac ccc tct cag aat aca gcc cag ttg gat cag ttt gat aga atc aag     144
Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
         35                  40                  45


acc ctt ggc acc ggc tcc ttt ggg cga gtg atg ctg gtg aag cac aag     192
Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
     50                  55                  60
```

```
gag agt ggg aac cac tac gcc atg aag atc tta gac aag cag aag gtg        240
Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65              70              75              80


gtg aag cta aag cag atc gag cac act ctg aat gag aag cgc atc ctg        288
Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85              90              95


cag gcc gtc aac ttc ccg ttc ctg gtc aaa ctt gaa ttc tcc ttc aag        336
Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
                100             105             110


gac aac tca aac ctg tac atg gtc atg gag tat gta gct ggt ggc gag        384
Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
                115             120             125


atg ttc tcc cac cta cgg cgg att gga agg ttc agc gag ccc cat gcc        432
Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
                130             135             140


cgt ttc tac gcg gcg cag atc gtc ctg acc ttt gag tat ctg cac tcc        480
Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145             150             155             160


ctg gac ctc atc tac cgg gac ctg aag ccc gag aat ctt ctc atc gac        528
Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165             170             175


cag cag ggc tat att cag gtg aca gac ttc ggt ttt gcc aag cgt gtg        576
Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
                180             185             190


aaa ggc cgt act tgg acc ttg tgt ggg acc cct gag tac ttg gcc ccc        624
Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
                195             200             205


gag att atc ctg agc aaa ggc tac aac aag gct gtg gac tgg tgg gct        672
Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
                210             215             220
```

```
ctc gga gtc ctc atc tac gag atg gct gct ggt tac cca ccc ttc ttc      720
Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225             230             235                 240


gct gac cag cct atc cag atc tat gag aaa atc gtc tct ggg aag gtg      768
Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245             250             255


cgg ttc cca tcc cac ttc agc tct gac ttg aag gac ctg ctg cgg aac      816
Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
                260             265             270


ctt ctg caa gtg gat cta acc aag cgc ttt gga aac ctc aag gac ggg      864
Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly
            275             280             285


gtc aat gac atc aag aac cac aag tgg ttt gcc acg act gac tgg att      912
Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
        290             295             300


gcc atc tat cag aga aag gtg gaa gct ccc ttc ata cca aag ttt aaa      960
Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305             310             315                 320


ggc cct ggg gac acg agt aac ttt gac gac tat gag gag gaa gag atc     1008
Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
                325             330             335


cgg gtc tcc atc aat gag aag tgt ggc aag gag ttt act gag ttt ggg     1056
Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly
                340             345             350


cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca att     1104
Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile
            355             360             365


ctt gtt gaa tta gat ggc gat gtt aat ggg caa aaa ttc tct gtt agt     1152
Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser
            370             375             380
```

```
gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa ttt     1200
Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe
385                     390                 395                 400


att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc act     1248
Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr
                405                 410                 415


act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat atg     1296
Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met
                420                 425                 430


aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta cag     1344
Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
            435                 440                 445


gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt gct     1392
Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala
        450                 455                 460


gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta aaa     1440
Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys
465                 470                 475                 480


ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg gaa     1488
Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu
                485                 490                 495


tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca aag     1536
Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys
                500                 505                 510


aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat gga     1584
Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly
            515                 520                 525


agc gtt caa tta gca gac cat tat caa caa aat act cca att ggc gat     1632
Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp
        530                 535                 540
```

```
ggc cct gtc ctt tta cca gac aac cat tac ctg tcc acg caa tct gcc        1680
Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala
545                 550                 555                 560


ctt tcc aaa gat ccc aac gaa aag aga gat cac atg atc ctt ctt gag        1728
Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu
                    565                 570                 575


ttt gta aca gct gct ggg att aca cat ggc atg gat gaa cta tac aaa        1776
Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
                    580                 585                 590


cct cag gag taa                                                        1788
Pro Gln Glu  *
            595
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<210> 2
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<212> PRT
<213> Aequorea victoria and mouse

<400> 2
Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val
 1               5                   10                  15
Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
                20                  25                  30
Asp Pro Ser Gln Asn Thr Ala Gln Leu Asp Gln Phe Asp Arg Ile Lys
             35                  40                  45
Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
         50                  55                  60
Glu Ser Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
65                  70                  75                  80
Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                85                  90                  95
Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
                100                 105                 110
Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Ala Gly Gly Glu
             115                 120                 125
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```
Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Ser Glu Pro His Ala
        130                 135                 140
Arg Phe Tyr Ala Ala Gln Ile Val Leu Thr Phe Glu Tyr Leu His Ser
145                 150                 155                 160
Leu Asp Leu Ile Tyr Arg Asp Leu Lys Pro Glu Asn Leu Leu Ile Asp
                165                 170                 175
Gln Gln Gly Tyr Ile Gln Val Thr Asp Phe Gly Phe Ala Lys Arg Val
                180                 185                 190
Lys Gly Arg Thr Trp Thr Leu Cys Gly Thr Pro Glu Tyr Leu Ala Pro
            195                 200                 205
Glu Ile Ile Leu Ser Lys Gly Tyr Asn Lys Ala Val Asp Trp Trp Ala
    210                 215                 220
Leu Gly Val Leu Ile Tyr Glu Met Ala Ala Gly Tyr Pro Pro Phe Phe
225                 230                 235                 240
Ala Asp Gln Pro Ile Gln Ile Tyr Glu Lys Ile Val Ser Gly Lys Val
                245                 250                 255
Arg Phe Pro Ser His Phe Ser Ser Asp Leu Lys Asp Leu Leu Arg Asn
                260                 265                 270
Leu Leu Gln Val Asp Leu Thr Lys Arg Phe Gly Asn Leu Lys Asp Gly
            275                 280                 285
Val Asn Asp Ile Lys Asn His Lys Trp Phe Ala Thr Thr Asp Trp Ile
    290                 295                 300
Ala Ile Tyr Gln Arg Lys Val Glu Ala Pro Phe Ile Pro Lys Phe Lys
305                 310                 315                 320
Gly Pro Gly Asp Thr Ser Asn Phe Asp Asp Tyr Glu Glu Glu Glu Ile
                325                 330                 335
Arg Val Ser Ile Asn Glu Lys Cys Gly Lys Glu Phe Thr Glu Phe Gly
                340                 345                 350
Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile
            355                 360                 365
Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val Ser
    370                 375                 380
Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe
385                 390                 395                 400
Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr
                405                 410                 415
Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met
                420                 425                 430
Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
            435                 440                 445
```

```
Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala
        450                 455                 460
Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys
465                 470                 475                 480
Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met Glu
                    485                 490                 495
Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro Lys
                500                 505                 510
Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp Gly
                515                 520                 525
Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp
                530                 535                 540
Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala
545                 550                 555                 560
Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu Glu
                    565                 570                 575
Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr Lys
                    580                 585                 590
Pro Gln Glu
        595


    <210> 3
    <211> 2751
    <212> DNA
    <213> Aequorea victoria and mouse


    <220>
    <221> CDS
    <222> (1)...(2751)


    <400> 3
atg gct gac gtt tac ccg gcc aac gac tcc acg gcg tct cag gac gtg      48
Met Ala Asp Val Tyr Pro Ala Asn Asp Ser Thr Ala Ser Gln Asp Val
1                   5                   10                  15


gcc aac cgc ttc gcc cgc aaa ggg gcg ctg agg cag aag aac gtg cat      96
Ala Asn Arg Phe Ala Arg Lys Gly Ala Leu Arg Gln Lys Asn Val His
            20                  25                  30


gag gtg aaa gac cac aaa ttc atc gcc cgc ttc ttc aag caa ccc acc     144
```

8

```
              Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr
                       35                  40                  45


              ttc tgc agc cac tgc acc gac ttc atc tgg ggg ttt ggg aaa caa ggc     192
              Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly
                       50                  55                  60


              ttc cag tgc caa gtt tgc tgt ttt gtg gtt cat aag agg tgc cat gag     240
              Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu
                       65                  70                  75                  80


              ttc gtt acg ttc tct tgt ccg ggt gcg gat aag gga cct gac act gac     288
              Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp
                                   85                  90                  95


              gac ccc agg agc aag cac aag ttc aaa atc cac aca tac gga agc cct     336
              Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro
                          100                 105                 110


              acc ttc tgt gat cac tgt ggg tcc ctg ctc tat gga ctt atc cac caa     384
              Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln
                          115                 120                 125


              ggg atg aaa tgt gac acc tgc gac atg aat gtt cac aac cag tgt gtg     432
              Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Asn Gln Cys Val
                       130                 135                 140


              atc aat gac cct agc ctc tgc gga atg gat cac aca gag aag agg ggg     480
              Ile Asn Asp Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly
                   145                 150                 155                 160


              cgg att tat ctg aag gct gag gtc act gat gaa aag ctc cac gtc acg     528
              Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr
                                   165                 170                 175


              gta cga gat gca aaa aat cta atc cct atg gat cca aat ggg ctt tcg     576
              Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser
                          180                 185                 190


              gat cct tat gtg aag ctg aaa cta atc cct gac ccc aag aat gag agc     624
```

```
Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
        195                 200                 205


aaa cag aaa acc aaa acc atc cgc tcc aac ctg aat cct cag tgg aat        672
Lys Gln Lys Thr Lys Thr Ile Arg Ser Asn Leu Asn Pro Gln Trp Asn
        210                 215                 220


gag tcc ttc acg ttc aaa tta aaa cct tca gac aaa gac cgg cga ctg        720
Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
225                 230                 235                 240


tct gta gaa atc tgg gac tgg gat cgg acg act cgg aat gac ttc atg        768
Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
                245                 250                 255


gga tcc ctt tcc ttt ggt gtc tca gag cta atg aag atg ccg gcc agt        816
Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
                260                 265                 270


gga tgg tat aaa gct cac aac caa gaa gag ggc gaa tat tac aac gtg        864
Gly Trp Tyr Lys Ala His Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
                275                 280                 285


ccc att cca gaa gga gat gaa gaa ggc aac atg gaa ctc agg cag aag        912
Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Met Glu Leu Arg Gln Lys
        290                 295                 300


ttt gag aaa gcc aag cta ggt cct gtt ggt aac aaa gtc atc agc cct        960
Phe Glu Lys Ala Lys Leu Gly Pro Val Gly Asn Lys Val Ile Ser Pro
305                 310                 315                 320


tca gaa gac aga aag caa cca tcc aac aac ctg gac aga gtg aaa ctc       1008
Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu
                325                 330                 335


aca gac ttc aac ttc ctc atg gtg ctg ggg aag ggg agt ttt ggg aag       1056
Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
                340                 345                 350


gtg atg ctt gct gac agg aag gga acg gag gaa ctg tac gcc atc aag       1104
```

```
Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
        355                 360                 365


atc ctg aag aag gac gtg gtg atc cag gac gac gac gtg gag tgc acc      1152
Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
        370                 375                 380


atg gtg gag aag cgc gtg ctg gcc ctg ctg gac aag ccg cca ttt ctg      1200
Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
385                 390                 395                 400


aca cag ctg cac tcc tgc ttc cag aca gtg gac cgg ctg tac ttc gtc      1248
Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
                405                 410                 415


atg gaa tac gtc aac ggc ggg gat ctt atg tac cac att cag caa gtc      1296
Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
                420                 425                 430


ggg aaa ttt aag gag cca caa gca gta ttc tac gca gcc gag atc tcc      1344
Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
        435                 440                 445


atc gga ctg ttc ttc ctt cat aaa aga ggg atc att tac agg gat ctg      1392
Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
        450                 455                 460


aag ctg aac aat gtc atg ctg aac tca gaa ggg cac atc aaa atc gcc      1440
Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala
465                 470                 475                 480


gac ttc ggg atg tgc aag gaa cac atg atg gat gga gtc acg acc agg      1488
Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
                485                 490                 495


acc ttc tgc gga act ccg gac tac att gcc cca gag ata atc gct tac      1536
Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
                500                 505                 510


cag ccg tac ggg aag tct gta gat tgg tgg gcg tac ggt gtg ctg ctg      1584
```

```
      Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
              515                 520                 525


      tac gag atg cta gcc ggg cag cct ccg ttt gat ggt gaa gat gaa gat    1632
      Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
              530                 535                 540


      gaa ctg ttt cag tct ata atg gag cac aac gtg tcc tac ccc aaa tcc    1680
      Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
      545                 550                 555                 560


      ttg tcc aag gaa gcc gtc tcc atc tgc aaa gga ctt atg acc aaa cag    1728
      Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln
                          565                 570                 575


      cct gcc aag cga ctg ggc tgc ggg ccc gag gga gag agg gat gtc aga    1776
      Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
                  580                 585                 590


      gag cat gcc ttc ttc agg agg atc gac tgg gag aaa ctg gag aac agg    1824
      Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg
              595                 600                 605


      gag atc caa cca cca ttc aag ccc aaa gtg tgt ggc aaa gga gca gaa    1872
      Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu
              610                 615                 620


      aac ttt gac aag ttc ttc acg cga gga cag cct gtc tta aca cca cca    1920
      Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
      625                 630                 635                 640


      gat cag ctg gtc att gct aac ata gac caa tct gat ttt gaa ggg ttc    1968
      Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe
                          645                 650                 655


      tcg tat gtc aac ccc cag ttt gtg cac cca atc ttg caa agt gca gta    2016
      Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
                  660                 665                 670


      ggg cgc gcc atg agt aaa gga gaa gaa ctt ttc act gga gtt gtc cca    2064
```

Gly Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro
        675   680   685

att ctt gtt gaa tta gat ggc gat gtt aat ggg caa aaa ttc tct gtt   2112
Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val
        690   695   700

agt gga gag ggt gaa ggt gat gca aca tac gga aaa ctt acc ctt aaa   2160
Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys
705   710   715   720

ttt att tgc act act ggg aag cta cct gtt cca tgg cca acg ctt gtc   2208
Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val
                725   730   735

act act ctc act tat ggt gtt caa tgc ttt tct aga tac cca gat cat   2256
Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His
                740   745   750

atg aaa cag cat gac ttt ttc aag agt gcc atg ccc gaa ggt tat gta   2304
Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val
                755   760   765

cag gaa aga act ata ttt tac aaa gat gac ggg aac tac aag aca cgt   2352
Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg
        770   775   780

gct gaa gtc aag ttt gaa ggt gat acc ctt gtt aat aga atc gag tta   2400
Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu
785   790   795   800

aaa ggt att gat ttt aaa gaa gat gga aac att ctt gga cac aaa atg   2448
Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met
                805   810   815

gaa tac aat tat aac tca cat aat gta tac atc atg gca gac aaa cca   2496
Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro
                820   825   830

aag aat ggc atc aaa gtt aac ttc aaa att aga cac aac att aaa gat   2544

Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp
        835   840   845

gga agc gtt caa tta gca gac cat tat caa caa aat act cca att ggc   2592
Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly
        850   855   860

gat ggc cct gtc ctt tta cca gac aac cat tac ctg tcc acg caa tct   2640
Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser
865   870   875   880

gcc ctt tcc aaa gat ccc aac gaa aag aga gat cac atg atc ctt ctt   2688
Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu
                885   890   895

gag ttt gta aca gct gct ggg att aca cat ggc atg gat gaa cta tac   2736
Glu Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr
                900   905   910

aaa cct cag gag taa   2751
Lys Pro Gln Glu *
                915

        <210> 4
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        <212> PRT
        <213> Aequorea victoria and mouse

        <400> 4
Met Ala Asp Val Tyr Pro Ala Asn Asp Ser Thr Ala Ser Gln Asp Val
1   5   10   15
Ala Asn Arg Phe Ala Arg Lys Gly Ala Leu Arg Gln Lys Asn Val His
                20   25   30
Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr
                35   40   45
Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly
            50   55   60
Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu
65   70   75   80

Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp
                    85   90   95

Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro
                    100   105   110

Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln
                115   120   125

Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Asn Gln Cys Val
    130   135   140

Ile Asn Asp Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly
145   150   155   160

Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr
                165   170   175

Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser
                180   185   190

Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
                195   200   205

Lys Gln Lys Thr Lys Thr Ile Arg Ser Asn Leu Asn Pro Gln Trp Asn
    210   215   220

Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
225   230   235   240

Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
                245   250   255

Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
                260   265   270

Gly Trp Tyr Lys Ala His Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
    275   280   285

Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Met Glu Leu Arg Gln Lys
    290   295   300

Phe Glu Lys Ala Lys Leu Gly Pro Val Gly Asn Lys Val Ile Ser Pro
305   310   315   320

Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu
                325   330   335

Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
                340   345   350

Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
    355   360   365

Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
    370   375   380

Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
385   390   395   400

Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
                405   410   415

Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
                420   425   430

Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
        435   440   445

Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
        450   455   460

Lys Leu Asn Asn Val Met Leu Asn Ser Glu Gly His Ile Lys Ile Ala
465   470   475   480

Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
                485   490   495

Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
                500   505   510

Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
        515   520   525

Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
        530   535   540

Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
545   550   555   560

Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys Gln
                565   570   575

Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
        580   585   590

Glu His Ala Phe Phe Arg Arg Ile Asp Trp Glu Lys Leu Glu Asn Arg
        595   600   605

Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu
        610   615   620

Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
625   630   635   640

Asp Gln Leu Val Ile Ala Asn Ile Asp Gln Ser Asp Phe Glu Gly Phe
                645   650   655

Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
                660   665   670

Gly Arg Ala Met Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro
        675   680   685

Ile Leu Val Glu Leu Asp Gly Asp Val Asn Gly Gln Lys Phe Ser Val
        690   695   700

Ser Gly Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys
705   710   715   720

```
Phe Ile Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val
                725                 730                 735
Thr Thr Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His
                740                 745                 750
Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val
            755                 760                 765
Gln Glu Arg Thr Ile Phe Tyr Lys Asp Asp Gly Asn Tyr Lys Thr Arg
        770                 775                 780
Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu
785                 790                 795                 800
Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Met
                805                 810                 815
Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Pro
                820                 825                 830
Lys Asn Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Lys Asp
            835                 840                 845
Gly Ser Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly
        850                 855                 860
Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser
865                 870                 875                 880
Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Ile Leu Leu
                885                 890                 895
Glu Phe Val Thr Ala Ala Gly Ile Thr His Gly Met Asp Glu Leu Tyr
                900                 905                 910
Lys Pro Gln Glu
        915
```

```
<210> 5
<211> 1896
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)...(1896)

<400> 5
atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg      48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
 1               5                  10                  15
```

```
gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc      96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
              20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc     144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
              35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc     192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
              50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag     240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
    65                  70                  75                  80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag     288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                  85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag     336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
              100                 105                 110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc     384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
              115                 120                 125

atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac     432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
              130                 135                 140

aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac     480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
    145                 150                 155                 160

ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc     528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
              165                 170                 175
```

```
gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc        576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190


ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg        624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
            195                 200                 205


agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc        672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
            210                 215                 220


gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc        720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240


gga ctc aga tct cga gct caa gct tcg aat tca acc atg gcg gcg gcg        768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ala Ala Ala
                245                 250                 255


gcg gct cag ggg ggc ggg ggc ggg gag ccc cgt aga acc gag ggg gtc        816
Ala Ala Gln Gly Gly Gly Gly Gly Glu Pro Arg Arg Thr Glu Gly Val
                260                 265                 270


ggc ccg ggg gtc ccg ggg gag gtg gag atg gtg aag ggg cag ccg ttc        864
Gly Pro Gly Val Pro Gly Glu Val Glu Met Val Lys Gly Gln Pro Phe
                275                 280                 285


gac gtg ggc ccg cgc tac acg cag ttg cag tac atc ggc gag ggc gcg        912
Asp Val Gly Pro Arg Tyr Thr Gln Leu Gln Tyr Ile Gly Glu Gly Ala
            290                 295                 300


tac ggc atg gtc agc tcg gcc tat gac cac gtg cgc aag act cgc gtg        960
Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg Lys Thr Arg Val
305                 310                 315                 320


gcc atc aag aag atc agc ccc ttc gaa cat cag acc tac tgc cag cgc       1008
Ala Ile Lys Lys Ile Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg
                325                 330                 335
```

```
acg ctc cgg gag atc cag atc ctg ctg cgc ttc cgc cat gag aat gtc     1056
Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val
          340                 345                 350


atc ggc atc cga gac att ctg cgg gcg tcc acc ctg gaa gcc atg aga     1104
Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu Glu Ala Met Arg
          355                 360                 365


gat gtc tac att gtg cag gac ctg atg gag act gac ctg tac aag ttg     1152
Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu
          370                 375                 380


ctg aaa agc cag cag ctg agc aat gac cat atc tgc tac ttc ctc tac     1200
Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr
385                 390                 395                 400


cag atc ctg cgg ggc ctc aag tac atc cac tcc gcc aac gtg ctc cac     1248
Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His
                  405                 410                 415


cga gat cta aag ccc tcc aac ctg ctc agc aac acc acc tgc gac ctt     1296
Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu
          420                 425                 430


aag att tgt gat ttc ggc ctg gcc cgg att gcc gat cct gag cat gac     1344
Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp
          435                 440                 445


cac acc ggc ttc ctg acg gag tat gtg gct acg cgc tgg tac cgg gcc     1392
His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
          450                 455                 460


cca gag atc atg ctg aac tcc aag ggc tat acc aag tcc atc gac atc     1440
Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile
465                 470                 475                 480


tgg tct gtg ggc tgc att ctg gct gag atg ctc tct aac cgg ccc atc     1488
Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile
                  485                 490                 495
```

```
ttc cct ggc aag cac tac ctg gat cag ctc aac cac att ctg ggc atc        1536
Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile
            500                 505                 510


ctg ggc tcc cca tcc cag gag gac ctg aat tgt atc atc aac atg aag        1584
Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys
            515                 520                 525


gcc cga aac tac cta cag tct ctg ccc tcc aag acc aag gtg gct tgg        1632
Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr Lys Val Ala Trp
            530                 535                 540


gcc aag ctt ttc ccc aag tca gac tcc aaa gcc ctt gac ctg ctg gac        1680
Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp
545                 550                 555                 560


cgg atg tta acc ttt aac ccc aat aaa cgg atc aca gtg gag gaa gcg        1728
Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala
                565                 570                 575


ctg gct cac ccc tac ctg gag cag tac tat gac ccg acg gat gag cca        1776
Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro Thr Asp Glu Pro
            580                 585                 590


gtg gcc gag gag ccc ttc acc ttc gcc atg gag ctg gat gac cta cct        1824
Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu Asp Asp Leu Pro
            595                 600                 605


aag gag cgg ctg aag gag ctc atc ttc cag gag aca gca cgc ttc cag        1872
Lys Glu Arg Leu Lys Glu Leu Ile Phe Gln Glu Thr Ala Arg Phe Gln
            610                 615                 620


ccc gga gtg ctg gag gcc ccc tag                                        1896
Pro Gly Val Leu Glu Ala Pro  *
625                 630
```

```
<210> 6
<211> 631
```

```
<212> PRT
<213> Aequorea victoria and human

<400> 6
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
 1               5                  10                  15
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
                20                  25                  30
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
            35                  40                  45
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
        50                  55                  60
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
                100                 105                 110
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
        130                 135                 140
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
                180                 185                 190
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
            195                 200                 205
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
        210                 215                 220
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ala Ala Ala
                245                 250                 255
Ala Ala Gln Gly Gly Gly Gly Gly Glu Pro Arg Arg Thr Glu Gly Val
            260                 265                 270
Gly Pro Gly Val Pro Gly Glu Val Glu Met Val Lys Gly Gln Pro Phe
        275                 280                 285
```

```
Asp Val Gly Pro Arg Tyr Thr Gln Leu Gln Tyr Ile Gly Glu Gly Ala
    290                 295                 300
Tyr Gly Met Val Ser Ser Ala Tyr Asp His Val Arg Lys Thr Arg Val
305                 310                 315                 320
Ala Ile Lys Lys Ile Ser Pro Phe Glu His Gln Thr Tyr Cys Gln Arg
                325                 330                 335
Thr Leu Arg Glu Ile Gln Ile Leu Leu Arg Phe Arg His Glu Asn Val
                340                 345                 350
Ile Gly Ile Arg Asp Ile Leu Arg Ala Ser Thr Leu Glu Ala Met Arg
                355                 360                 365
Asp Val Tyr Ile Val Gln Asp Leu Met Glu Thr Asp Leu Tyr Lys Leu
    370                 375                 380
Leu Lys Ser Gln Gln Leu Ser Asn Asp His Ile Cys Tyr Phe Leu Tyr
385                 390                 395                 400
Gln Ile Leu Arg Gly Leu Lys Tyr Ile His Ser Ala Asn Val Leu His
                405                 410                 415
Arg Asp Leu Lys Pro Ser Asn Leu Leu Ser Asn Thr Thr Cys Asp Leu
                420                 425                 430
Lys Ile Cys Asp Phe Gly Leu Ala Arg Ile Ala Asp Pro Glu His Asp
                435                 440                 445
His Thr Gly Phe Leu Thr Glu Tyr Val Ala Thr Arg Trp Tyr Arg Ala
    450                 455                 460
Pro Glu Ile Met Leu Asn Ser Lys Gly Tyr Thr Lys Ser Ile Asp Ile
465                 470                 475                 480
Trp Ser Val Gly Cys Ile Leu Ala Glu Met Leu Ser Asn Arg Pro Ile
                485                 490                 495
Phe Pro Gly Lys His Tyr Leu Asp Gln Leu Asn His Ile Leu Gly Ile
                500                 505                 510
Leu Gly Ser Pro Ser Gln Glu Asp Leu Asn Cys Ile Ile Asn Met Lys
                515                 520                 525
Ala Arg Asn Tyr Leu Gln Ser Leu Pro Ser Lys Thr Lys Val Ala Trp
    530                 535                 540
Ala Lys Leu Phe Pro Lys Ser Asp Ser Lys Ala Leu Asp Leu Leu Asp
545                 550                 555                 560
Arg Met Leu Thr Phe Asn Pro Asn Lys Arg Ile Thr Val Glu Glu Ala
                565                 570                 575
Leu Ala His Pro Tyr Leu Glu Gln Tyr Tyr Asp Pro Thr Asp Glu Pro
    580                 585                 590
Val Ala Glu Glu Pro Phe Thr Phe Ala Met Glu Leu Asp Asp Leu Pro
    595                 600                 605
```

```
Lys Glu Arg Leu Lys Glu Leu Ile Phe Gln Glu Thr Ala Arg Phe Gln
        610                 615                 620
Pro Gly Val Leu Glu Ala Pro
625                 630


    <210> 7
    <211> 2160
    <212> DNA
    <213> Aequorea victoria and human

    <220>
    <221> CDS
    <222> (1)...(2160)

    <400> 7
atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg       48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc       96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
                20                  25                  30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc       144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
            35                  40                  45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc       192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
        50                  55                  60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag       240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag       288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag       336
```

```
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
        100                 105                 110


gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc    384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125


atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac    432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
        130                 135                 140


aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac    480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160


ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc    528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175


gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc    576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
        180                 185                 190


ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg    624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205


agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc    672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
        210                 215                 220


gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc    720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240


gga ctc aga tct cga gct caa gct tcg aat tcg acc atg tcg tcc atc    768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile
                245                 250                 255


ttg cca ttc acg ccg cca gtt gtg aag aga ctg ctg gga tgg aag aag    816
```

```
Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu Gly Trp Lys Lys
            260             265             -   270


tca gct ggt ggg tct gga gga gca ggc gga gga gag cag aat ggg cag       864
Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln
            275             280             285


gaa gaa aag tgg tgt gag aaa gca gtg aaa agt ctg gtg aag aag cta       912
Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu
            290             295             300


aag aaa aca gga cga tta gat gag ctt gag aaa gcc atc acc act caa       960
Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln
305             310             315             320


aac tgt aat act aaa tgt gtt acc ata cca agc act tgc tct gaa att      1008
Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr Cys Ser Glu Ile
                325             330             335


tgg gga ctg agt aca cca aat acg ata gat cag tgg gat aca aca ggc      1056
Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp Asp Thr Thr Gly
            340             345             350


ctt tac agc ttc tct gaa caa acc agg tct ctt gat ggt cgt ctc cag      1104
Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp Gly Arg Leu Gln
            355             360             365


gta tcc cat cga aaa gga ttg cca cat gtt ata tat tgc cga tta tgg      1152
Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr Cys Arg Leu Trp
            370             375             380


cgc tgg cct gat ctt cac agt cat cat gaa ctc aag gca att gaa aac      1200
Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys Ala Ile Glu Asn
385                 390             395                 400


tgc gaa tat gct ttt aat ctt aaa aag gat gaa gta tgt gta aac cct      1248
Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val Cys Val Asn Pro
                405             410             415


tac cac tat cag aga gtt gag aca cca gtt ttg cct cca gta tta gtg      1296
```

```
                    Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val
                            420                 425                 430


ccc cga cac acc gag atc cta aca gaa ctt ccg cct ctg gat gac tat    1344
Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr
        435                 440                 445


act cac tcc att cca gaa aac act aac ttc cca gca gga att gag cca    1392
Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro
        450                 455                 460


cag agt aat tat att cca gaa acg cca cct cct gga tat atc agt gaa    1440
Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu
465                 470                 475                 480


gat gga gaa aca agt gac caa cag ttg aat caa agt atg gac aca ggc    1488
Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly
                    485                 490                 495


tct cca gca gaa cta tct cct act act ctt tcc cct gtt aat cat agc    1536
Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser
                500                 505                 510


ttg gat tta cag cca gtt act tac tca gaa cct gca ttt tgg tgt tca    1584
Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser
            515                 520                 525


ata gca tat tat gaa tta aat cag agg gtt gga gaa acc ttc cat gca    1632
Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala
        530                 535                 540


tca cag ccc tca ctc act gta gat ggc ttt aca gac cca tca aat tca    1680
Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser
545                 550                 555                 560


gag agg ttc tgc tta ggt tta ctc tcc aat gtt aac cga aat gcc acg    1728
Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr
                565                 570                 575


gta gaa atg aca aga agg cat ata gga aga gga gtg cgc tta tac tac    1776
```

Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr
          580   585   590

ata ggt ggg gaa gtt ttt gct gag tgc cta agt gat agt gca atc ttt   1824
Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe
          595   600   605

gtg cag agc ccc aat tgt aat cag aga tat ggc tgg cac cct gca aca   1872
Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr
          610   615   620

gtg tgt aaa att cca cca ggc tgt aat ctg aag atc ttc aac aac cag   1920
Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln
625   630   635   640

gaa ttt gct gct ctt ctg gct cag tct gtt aat cag ggt ttt gaa gcc   1968
Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala
                  645   650   655

gtc tat cag cta act aga atg tgc acc ata aga atg agt ttt gtg aaa   2016
Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys
          660   665   670

ggg tgg gga gca gaa tac cga agg cag acg gta aca agt act cct tgc   2064
Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys
          675   680   685

tgg att gaa ctt cat ctg aat gga cct cta cag tgg ttg gac aaa gta   2112
Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val
          690   695   700

tta act cag atg gga tcc cct tca gtg cgt tgc tca agc atg tca taa   2160
Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser *
705   710   715

        <210> 8
        <211> 719
        <212> PRT
        <213> Aequorea victoria and human

<400> 8

Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1   5   10   15

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20   25   30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
        35   40   45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
    50   55   60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65   70   75   80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85   90   95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100   105   110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115   120   125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130   135   140

Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145   150   155   160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165   170   175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180   185   190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195   200   205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210   215   220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225   230   235   240

Gly Leu Arg Ser Arg Ala Gln Ala Ser Asn Ser Thr Met Ser Ser Ile
                245   250   255

Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu Gly Trp Lys Lys
                260   265   270

Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu Gln Asn Gly Gln
    275   280   285

Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu Val Lys Lys Leu
    290   295   300

```
Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala Ile Thr Thr Gln
305                 310                 315                 320
Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr Cys Ser Glu Ile
                325                 330                 335
Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp Asp Thr Thr Gly
                340                 345                 350
Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp Gly Arg Leu Gln
                355                 360                 365
Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr Cys Arg Leu Trp
                370                 375                 380
Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys Ala Ile Glu Asn
385                 390                 395                 400
Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val Cys Val Asn Pro
                405                 410                 415
Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro Pro Val Leu Val
                420                 425                 430
Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro Leu Asp Asp Tyr
                435                 440                 445
Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala Gly Ile Glu Pro
                450                 455                 460
Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly Tyr Ile Ser Glu
465                 470                 475                 480
Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser Met Asp Thr Gly
                485                 490                 495
Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro Val Asn His Ser
                500                 505                 510
Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala Phe Trp Cys Ser
                515                 520                 525
Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu Thr Phe His Ala
                530                 535                 540
Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp Pro Ser Asn Ser
545                 550                 555                 560
Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn Arg Asn Ala Thr
                565                 570                 575
Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val Arg Leu Tyr Tyr
                580                 585                 590
Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp Ser Ala Ile Phe
                595                 600                 605
Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp His Pro Ala Thr
610                 615                 620
```

```
Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile Phe Asn Asn Gln
625                 630                 635                 640
Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln Gly Phe Glu Ala
                    645                 650                 655
Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met Ser Phe Val Lys
                660                 665                 670
Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr Ser Thr Pro Cys
                675                 680                 685
Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp Leu Asp Lys Val
                690                 695                 700
Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser Ser Met Ser
705                 710                 715
```

```
<210> 9
<211> 2157
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)...(2157)

<400> 9
atg tcg tcc atc ttg cca ttc acg ccg cca gtt gtg aag aga ctg ctg      48
Met Ser Ser Ile Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu
1               5                   10                  15

gga tgg aag aag tca gct ggt ggg tct gga gga gca ggc gga gga gag      96
Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu
                20                  25                  30

cag aat ggg cag gaa gaa aag tgg tgt gag aaa gca gtg aaa agt ctg     144
Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu
        35                  40                  45

gtg aag aag cta aag aaa aca gga cga tta gat gag ctt gag aaa gcc     192
Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala
        50                  55                  60

atc acc act caa aac tgt aat act aaa tgt gtt acc ata cca agc act     240
```

```
Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr
65                  70                  75                  80


tgc tct gaa att tgg gga ctg agt aca cca aat acg ata gat cag tgg        288
Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp
                85                  90                  95


gat aca aca ggc ctt tac agc ttc tct gaa caa acc agg tct ctt gat        336
Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp
                100                 105                 110


ggt cgt ctc cag gta tcc cat cga aaa gga ttg cca cat gtt ata tat        384
Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr
                115                 120                 125


tgc cga tta tgg cgc tgg cct gat ctt cac agt cat cat gaa ctc aag        432
Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys
                130                 135                 140


gca att gaa aac tgc gaa tat gct ttt aat ctt aaa aag gat gaa gta        480
Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val
145                 150                 155                 160


tgt gta aac cct tac cac tat cag aga gtt gag aca cca gtt ttg cct        528
Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro
                165                 170                 175


cca gta tta gtg ccc cga cac acc gag atc cta aca gaa ctt ccg cct        576
Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro
                180                 185                 190


ctg gat gac tat act cac tcc att cca gaa aac act aac ttc cca gca        624
Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala
                195                 200                 205


gga att gag cca cag agt aat tat att cca gaa acg cca cct cct gga        672
Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly
                210                 215                 220


tat atc agt gaa gat gga gaa aca agt gac caa cag ttg aat caa agt        720
```

```
Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser
225                 230             235   .             240
```

```
atg gac aca ggc tct cca gca gaa cta tct cct act act ctt tcc cct   768
Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro
                245             250             255
```

```
gtt aat cat agc ttg gat tta cag cca gtt act tac tca gaa cct gca   816
Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala
            260             265             270
```

```
ttt tgg tgt tca ata gca tat tat gaa tta aat cag agg gtt gga gaa   864
Phe Trp Cys Ser Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu
        275             280             285
```

```
acc ttc cat gca tca cag ccc tca ctc act gta gat ggc ttt aca gac   912
Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp
        290             295             300
```

```
cca tca aat tca gag agg ttc tgc tta ggt tta ctc tcc aat gtt aac   960
Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn
305             310             315             320
```

```
cga aat gcc acg gta gaa atg aca aga agg cat ata gga aga gga gtg   1008
Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val
            325             330             335
```

```
cgc tta tac tac ata ggt ggg gaa gtt ttt gct gag tgc cta agt gat   1056
Arg Leu Tyr Tyr Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp
            340             345             350
```

```
agt gca atc ttt gtg cag agc ccc aat tgt aat cag aga tat ggc tgg   1104
Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp
            355             360             365
```

```
cac cct gca aca gtg tgt aaa att cca cca ggc tgt aat ctg aag atc   1152
His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile
            370             375             380
```

```
ttc aac aac cag gaa ttt gct gct ctt ctg gct cag tct gtt aat cag   1200
```

```
Phe Asn Asn Gln Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln
385              390                  395                  400
```

```
ggt ttt gaa gcc gtc tat cag cta act aga atg tgc acc ata aga atg    1248
Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met
                405                  410                  415
```

```
agt ttt gtg aaa ggg tgg gga gca gaa tac cga agg cag acg gta aca    1296
Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr
        420                  425                  430
```

```
agt act cct tgc tgg att gaa ctt cat ctg aat gga cct cta cag tgg    1344
Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp
            435                  440                  445
```

```
ttg gac aaa gta tta act cag atg gga tcc cct tca gtg cgt tgc tca    1392
Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser
        450                  455                  460
```

```
agc atg tca tgg gta ccg cgg gcc cgg gat cca ccg gtc gcc acc atg    1440
Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met
465                  470                  475                  480
```

```
gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc    1488
Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
                485                  490                  495
```

```
gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag    1536
Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
            500                  505                  510
```

```
ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc tgc    1584
Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
        515                  520                  525
```

```
acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg    1632
Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu
    530                  535                  540
```

```
acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag    1680
```

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
545   550   555   560

cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag cgc   1728
His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
                   565   570   575

acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg   1776
Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
              580   585   590

aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc   1824
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
              595   600   605

gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac   1872
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
              610   615   620

tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc   1920
Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
625   630   635   640

atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg   1968
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
                   645   650   655

cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc   2016
Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
              660   665   670

gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc   2064
Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
              675   680   685

aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg   2112
Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
              690   695   700

acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag taa   2157

Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys   *
705   710   715

<210> 10
<211> 718
<212> PRT
<213> Aequorea victoria and human

<400> 10
Met Ser Ser Ile Leu Pro Phe Thr Pro Pro Val Val Lys Arg Leu Leu
1   5   10   15
Gly Trp Lys Lys Ser Ala Gly Gly Ser Gly Gly Ala Gly Gly Gly Glu
                20   25   30
Gln Asn Gly Gln Glu Glu Lys Trp Cys Glu Lys Ala Val Lys Ser Leu
            35   40   45
Val Lys Lys Leu Lys Lys Thr Gly Arg Leu Asp Glu Leu Glu Lys Ala
        50   55   60
Ile Thr Thr Gln Asn Cys Asn Thr Lys Cys Val Thr Ile Pro Ser Thr
65   70   75   80
Cys Ser Glu Ile Trp Gly Leu Ser Thr Pro Asn Thr Ile Asp Gln Trp
                85   90   95
Asp Thr Thr Gly Leu Tyr Ser Phe Ser Glu Gln Thr Arg Ser Leu Asp
                100   105   110
Gly Arg Leu Gln Val Ser His Arg Lys Gly Leu Pro His Val Ile Tyr
            115   120   125
Cys Arg Leu Trp Arg Trp Pro Asp Leu His Ser His His Glu Leu Lys
            130   135   140
Ala Ile Glu Asn Cys Glu Tyr Ala Phe Asn Leu Lys Lys Asp Glu Val
145   150   155   160
Cys Val Asn Pro Tyr His Tyr Gln Arg Val Glu Thr Pro Val Leu Pro
                165   170   175
Pro Val Leu Val Pro Arg His Thr Glu Ile Leu Thr Glu Leu Pro Pro
            180   185   190
Leu Asp Asp Tyr Thr His Ser Ile Pro Glu Asn Thr Asn Phe Pro Ala
            195   200   205
Gly Ile Glu Pro Gln Ser Asn Tyr Ile Pro Glu Thr Pro Pro Pro Gly
        210   215   220
Tyr Ile Ser Glu Asp Gly Glu Thr Ser Asp Gln Gln Leu Asn Gln Ser
225   230   235   240

Met Asp Thr Gly Ser Pro Ala Glu Leu Ser Pro Thr Thr Leu Ser Pro
                    245   250   255

Val Asn His Ser Leu Asp Leu Gln Pro Val Thr Tyr Ser Glu Pro Ala
                    260   265   270

Phe Trp Cys Ser Ile Ala Tyr Tyr Glu Leu Asn Gln Arg Val Gly Glu
                    275   280   285

Thr Phe His Ala Ser Gln Pro Ser Leu Thr Val Asp Gly Phe Thr Asp
                    290   295   300

Pro Ser Asn Ser Glu Arg Phe Cys Leu Gly Leu Leu Ser Asn Val Asn
305   310   315   320

Arg Asn Ala Thr Val Glu Met Thr Arg Arg His Ile Gly Arg Gly Val
                    325   330   335

Arg Leu Tyr Tyr Ile Gly Gly Glu Val Phe Ala Glu Cys Leu Ser Asp
                    340   345   350

Ser Ala Ile Phe Val Gln Ser Pro Asn Cys Asn Gln Arg Tyr Gly Trp
                    355   360   365

His Pro Ala Thr Val Cys Lys Ile Pro Pro Gly Cys Asn Leu Lys Ile
                    370   375   380

Phe Asn Asn Gln Glu Phe Ala Ala Leu Leu Ala Gln Ser Val Asn Gln
385   390   395   400

Gly Phe Glu Ala Val Tyr Gln Leu Thr Arg Met Cys Thr Ile Arg Met
                    405   410   415

Ser Phe Val Lys Gly Trp Gly Ala Glu Tyr Arg Arg Gln Thr Val Thr
                    420   425   430

Ser Thr Pro Cys Trp Ile Glu Leu His Leu Asn Gly Pro Leu Gln Trp
                    435   440   445

Leu Asp Lys Val Leu Thr Gln Met Gly Ser Pro Ser Val Arg Cys Ser
                    450   455   460

Ser Met Ser Trp Val Pro Arg Ala Arg Asp Pro Pro Val Ala Thr Met
465   470   475   480

Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val
                    485   490   495

Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu
                    500   505   510

Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys
                    515   520   525

Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu
                    530   535   540

Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln
545   550   555   560

```
His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg
                 565                 570                 575
Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val
                 580                 585                 590
Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile
                 595                 600                 605
Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn
                 610                 615                 620
Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly
625                 630                 635                 640
Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val
                 645                 650                 655
Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro
                 660                 665                 670
Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser
                 675                 680                 685
Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val
                 690                 695                 700
Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
705                 710                 715
```

```
<210> 11
<211> 1908
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)...(1908)

<400> 11
atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg      48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15


gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc      96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
                20                  25                  30


gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc     144
```

```
                Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
                     35                  40                  45
```

```
tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc      192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
     50                  55                  60
```

```
ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag      240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
     65                  70                  75                  80
```

```
cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag      288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                     85                  90                  95
```

```
cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag      336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
                    100                 105                 110
```

```
gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc      384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
                    115                 120                 125
```

```
atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac      432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
                    130                 135                 140
```

```
aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
     145                 150                 155                 160
```

```
ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                    165                 170                 175
```

```
gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
                    180                 185                 190
```

```
ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
```

```
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
         195                 200             .   205


agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
         210                 215                 220


gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240


gga ctc aga tct cga gct caa gct tcc atg agc gag acg gtc atc atg      768
Gly Leu Arg Ser Arg Ala Gln Ala Ser Met Ser Glu Thr Val Ile Met
                 245                 250                 255


agc gag acg gtc atc tgt tcc agc cgg gcc act gtg atg ctt tat gat      816
Ser Glu Thr Val Ile Cys Ser Ser Arg Ala Thr Val Met Leu Tyr Asp
                 260                 265         .       270


gat ggc aac aag cga tgg ctc cct gct ggc acg ggt ccc cag gcc ttc      864
Asp Gly Asn Lys Arg Trp Leu Pro Ala Gly Thr Gly Pro Gln Ala Phe
             275                 280                 285


agc cgc gtc cag atc tac cac aac ccc acg gcc aat tcc ttt cgc gtc      912
Ser Arg Val Gln Ile Tyr His Asn Pro Thr Ala Asn Ser Phe Arg Val
         290                 295                 300


gtg ggc cgg aag atg cag ccc gac cag cag gtg gtc atc aac tgt gcc      960
Val Gly Arg Lys Met Gln Pro Asp Gln Gln Val Val Ile Asn Cys Ala
305                 310                 315                 320


atc gtc cgg ggt gtc aag tat aac cag gcc acc ccc aac ttc cat cag     1008
Ile Val Arg Gly Val Lys Tyr Asn Gln Ala Thr Pro Asn Phe His Gln
                 325                 330                 335


tgg cgc gac gct cgc cag gtc tgg ggc ctc aac ttc ggc agc aag gag     1056
Trp Arg Asp Ala Arg Gln Val Trp Gly Leu Asn Phe Gly Ser Lys Glu
             340                 345                 350


gat gcg gcc cag ttt gcc gcc ggc atg gcc agt gcc cta gag gcg ttg     1104
```

Asp Ala Ala Gln Phe Ala Ala Gly Met Ala Ser Ala Leu Glu Ala Leu
    355   360   365

gaa gga ggt ggg ccc cct cca ccc cca gca ctt ccc acc tgg tcg gtc   1152
Glu Gly Gly Gly Pro Pro Pro Pro Pro Ala Leu Pro Thr Trp Ser Val
    370   375   380

ccg aac ggc ccc tcc ccg gag gag gtg gag cag cag aaa agg cag cag   1200
Pro Asn Gly Pro Ser Pro Glu Glu Val Glu Gln Gln Lys Arg Gln Gln
    385   390   395   400

ccc ggc ccg tcg gag cac ata gag cgc cgg gtc tcc aat gca gga ggc   1248
Pro Gly Pro Ser Glu His Ile Glu Arg Arg Val Ser Asn Ala Gly Gly
            405   410   415

cca cct gct ccc ccc gct ggg ggt cca ccc cca cca cca gga cct ccc   1296
Pro Pro Ala Pro Pro Ala Gly Gly Pro Pro Pro Pro Gly Pro Pro
            420   425   430

cct cct cca ggt ccc ccc cca ccc cca ggt ttg ccc cct tcg ggg gtc   1344
Pro Pro Pro Gly Pro Pro Pro Pro Pro Gly Leu Pro Pro Ser Gly Val
            435   440   445

cca gct gca gcg cac gga gca ggg gga gga cca ccc cct gca ccc cct   1392
Pro Ala Ala Ala His Gly Ala Gly Gly Gly Pro Pro Pro Ala Pro Pro
    450   455   460

ctc ccg gca gca cag ggc cct ggt ggt ggg gga gct ggg gcc cca ggc   1440
Leu Pro Ala Ala Gln Gly Pro Gly Gly Gly Gly Ala Gly Ala Pro Gly
465   470   475   480

ctg gcc gca gct att gct gga gcc aaa ctc agg aaa gtc agc aag cag   1488
Leu Ala Ala Ala Ile Ala Gly Ala Lys Leu Arg Lys Val Ser Lys Gln
                485   490   495

gag gag gcc tca ggg ggg ccc aca gcc ccc aaa gct gag agt ggt cga   1536
Glu Glu Ala Ser Gly Gly Pro Thr Ala Pro Lys Ala Glu Ser Gly Arg
            500   505   510

agc gga ggt ggg gga ctc atg gaa gag atg aac gcc atg ctg gcc cgg   1584

Ser Gly Gly Gly Gly Leu Met Glu Glu Met Asn Ala Met Leu Ala Arg
        515   520   525

aga agg aaa gcc acg caa gtt ggg gag aaa acc ccc aag gat gaa tct   1632
Arg Arg Lys Ala Thr Gln Val Gly Glu Lys Thr Pro Lys Asp Glu Ser
        530   535   540

gcc aat cag gag gag cca gag gcc aga gtc ccg gcc cag agt gaa tct   1680
Ala Asn Gln Glu Glu Pro Glu Ala Arg Val Pro Ala Gln Ser Glu Ser
    545   550   555   560

gtg cgg aga ccc tgg gag aag aac agc aca acc ttg cca agg atg aag   1728
Val Arg Arg Pro Trp Glu Lys Asn Ser Thr Thr Leu Pro Arg Met Lys
                565   570   575

tcg tct tct tcg gtg acc act tcc gag acc caa ccc tgc acg ccc agc   1776
Ser Ser Ser Ser Val Thr Thr Ser Glu Thr Gln Pro Cys Thr Pro Ser
                580   585   590

tcc agt gat tac tcg gac cta cag agg gtg aaa cag gag ctt ctg gaa   1824
Ser Ser Asp Tyr Ser Asp Leu Gln Arg Val Lys Gln Glu Leu Leu Glu
            595   600   605

gag gtg aag aag gaa ttg cag aaa gtg aaa gag gaa atc att gaa gcc   1872
Glu Val Lys Lys Glu Leu Gln Lys Val Lys Glu Glu Ile Ile Glu Ala
        610   615   620

ttc gtc cag gag ctg agg aag cgg ggt tct ccc tga   1908
Phe Val Gln Glu Leu Arg Lys Arg Gly Ser Pro *
625   630   635

        <210> 12
        <211> 635
        <212> PRT
        <213> Aequorea victoria and human

        <400> 12
    Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
        1   5   10   15

Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
           20   25   30

Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
           35   40   45

Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
50   55   60

Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65   70   75   80

Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
           85   90   95

Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
         100   105   110

Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
         115   120   125

Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
       130   135   140

Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145   150   155   160

Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
         165   170   175

Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
         180   185   190

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
         195   200   205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
       210   215   220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225   230   235   240

Gly Leu Arg Ser Arg Ala Gln Ala Ser Met Ser Glu Thr Val Ile Met
         245   250   255

Ser Glu Thr Val Ile Cys Ser Ser Arg Ala Thr Val Met Leu Tyr Asp
       260   265   270

Asp Gly Asn Lys Arg Trp Leu Pro Ala Gly Thr Gly Pro Gln Ala Phe
       275   280   285

Ser Arg Val Gln Ile Tyr His Asn Pro Thr Ala Asn Ser Phe Arg Val
       290   295   300

Val Gly Arg Lys Met Gln Pro Asp Gln Gln Val Val Ile Asn Cys Ala
305   310   315   320

Ile Val Arg Gly Val Lys Tyr Asn Gln Ala Thr Pro Asn Phe His Gln
       325   330   335

Trp Arg Asp Ala Arg Gln Val Trp Gly Leu Asn Phe Gly Ser Lys Glu
            340   345   350

Asp Ala Ala Gln Phe Ala Ala Gly Met Ala Ser Ala Leu Glu Ala Leu
            355   360   365

Glu Gly Gly Gly Pro Pro Pro Pro Pro Ala Leu Pro Thr Trp Ser Val
            370   375   380

Pro Asn Gly Pro Ser Pro Glu Glu Val Glu Gln Gln Lys Arg Gln Gln
385   390   395   400

Pro Gly Pro Ser Glu His Ile Glu Arg Arg Val Ser Asn Ala Gly Gly
            405   410   415

Pro Pro Ala Pro Pro Ala Gly Gly Pro Pro Pro Pro Gly Pro Pro
            420   425   430

Pro Pro Pro Gly Pro Pro Pro Pro Pro Gly Leu Pro Pro Ser Gly Val
            435   440   445

Pro Ala Ala Ala His Gly Ala Gly Gly Gly Pro Pro Pro Ala Pro Pro
            450   455   460

Leu Pro Ala Ala Gln Gly Pro Gly Gly Gly Gly Ala Gly Ala Pro Gly
465   470   475   480

Leu Ala Ala Ala Ile Ala Gly Ala Lys Leu Arg Lys Val Ser Lys Gln
            485   490   495

Glu Glu Ala Ser Gly Gly Pro Thr Ala Pro Lys Ala Glu Ser Gly Arg
            500   505   510

Ser Gly Gly Gly Gly Leu Met Glu Glu Met Asn Ala Met Leu Ala Arg
            515   520   525

Arg Arg Lys Ala Thr Gln Val Gly Glu Lys Thr Pro Lys Asp Glu Ser
            530   535   540

Ala Asn Gln Glu Glu Pro Glu Ala Arg Val Pro Ala Gln Ser Glu Ser
545   550   555   560

Val Arg Arg Pro Trp Glu Lys Asn Ser Thr Thr Leu Pro Arg Met Lys
                    565   570   575

Ser Ser Ser Ser Val Thr Thr Ser Glu Thr Gln Pro Cys Thr Pro Ser
                    580   585   590

Ser Ser Asp Tyr Ser Asp Leu Gln Arg Val Lys Gln Glu Leu Leu Glu
            595   600   605

Glu Val Lys Lys Glu Leu Gln Lys Val Lys Glu Glu Ile Ile Glu Ala
            610   615   620

Phe Val Gln Glu Leu Arg Lys Arg Gly Ser Pro
625   630   635

<210> 13

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<211> 2394
<212> DNA
<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)...(2394)

<400> 13
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atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg   48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
 1   5   10   15

gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc   96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
             20   25   30

gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc   144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
         35   40   45

tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc   192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
     50   55   60

ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag   240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
 65   70   75   80

cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag   288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                 85   90   95

cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag   336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
                 100   105   110

gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc   384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
             115   120   125

45

```
atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac        432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
    130                 135                 140


aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac        480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160


ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc        528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175


gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc        576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190


ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg        624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205


agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc        672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
    210                 215                 220


gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc        720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240


gga ctc aga tct cga gcc atg gac gaa ctg ttc ccc ctc atc ttc ccg        768
Gly Leu Arg Ser Arg Ala Met Asp Glu Leu Phe Pro Leu Ile Phe Pro
                245                 250                 255


gca gag cca gcc cag gcc tct ggc ccc tat gtg gag atc att gag cag        816
Ala Glu Pro Ala Gln Ala Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln
                260                 265                 270


ccc aag cag cgg ggc atg cgc ttc cgc tac aag tgc gag ggg cgc tcc        864
Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser
            275                 280                 285
```

```
gcg ggc agc atc cca ggc gag agg agc aca gat acc acc aag acc cac       912
Ala Gly Ser Ile Pro Gly Glu Arg Ser Thr Asp Thr Thr Lys Thr His
    290                 295                 300

ccc acc atc aag atc aat ggc tac aca gga cca ggg aca gtg cgc atc       960
Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile
305                 310                 315                 320

tcc ctg gtc acc aag gac cct cct cac cgg cct cac ccc cac gag ctt      1008
Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu
                325                 330                 335

gta gga aag gac tgc cgg gat ggc ttc tat gag gct gag ctc tgc ccg      1056
Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro
                340                 345                 350

gac cgc tgc atc cac agt ttc cag aac ctg gga atc cag tgt gtg aag      1104
Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys
                355                 360                 365

aag cgg gac ctg gag cag gct atc agt cag cgc atc cag acc aac aac      1152
Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn
    370                 375                 380

aac ccc ttc caa gtt cct ata gaa gag cag cgt ggg gac tac gac ctg      1200
Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu
385                 390                 395                 400

aat gct gtg cgg ctc tgc ttc cag gtg aca gtg cgg gac cca tca ggc      1248
Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly
                405                 410                 415

agg ccc ctc cgc ctg ccg cct gtc ctt cct cat ccc atc ttt gac aat      1296
Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn
            420                 425                 430

cgt gcc ccc aac act gcc gag ctc aag atc tgc cga gtg aac cga aac      1344
Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn
        435                 440                 445
```

47

```
tct ggc agc tgc ctc ggt ggg gat gag atc ttc cta ctg tgt gac aag      1392
Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys
    450                 455                 460


gtg cag aaa gag gac att gag gtg tat ttc acg gga cca ggc tgg gag      1440
Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu
465                 470                 475                 480


gcc cga ggc tcc ttt tcg caa gct gat gtg cac cga caa gtg gcc att      1488
Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile
                485                 490                 495


gtg ttc cgg acc cct ccc tac gca gac ccc agc ctg cag gct cct gtg      1536
Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val
                500                 505                 510


cgt gtc tcc atg cag ctg cgg cgg cct tcc gac cgg gag ctc agt gag      1584
Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu
                515                 520                 525


ccc atg gaa ttc cag tac ctg cca gat aca gac gat cgt cac cgg att      1632
Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile
    530                 535                 540


gag gag aaa cgt aaa agg aca tat gag acc ttc aag agc atc atg aag      1680
Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys
545                 550                 555                 560


aag agt cct ttc agc gga ccc acc gac ccc cgg cct cca cct cga cgc      1728
Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg
                565                 570                 575


att gct gtg cct tcc cgc agc tca gct tct gtc ccc aag cca gca ccc      1776
Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro
                580                 585                 590


cag ccc tat ccc ttt acg tca tcc ctg agc acc atc aac tat gat gag      1824
Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu
                595                 600                 605
```

```
ttt ccc acc atg gtg ttt cct tct ggg cag atc agc cag gcc tcg gcc        1872
Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
    610             615             620


ttg gcc ccg gcc cct ccc caa gtc ctg ccc cag gct cca gcc cct gcc        1920
Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala
625             630             635             640


cct gct cca gcc atg gta tca gct ctg gcc cag gcc cca gcc cct gtc        1968
Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val
            645             650             655


cca gtc cta gcc cca ggc cct cct cag gct gtg gcc cca cct gcc ccc        2016
Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro
            660             665             670


aag ccc acc cag gct ggg gaa gga acg ctg tca gag gcc ctg ctg cag        2064
Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln
        675             680             685


ctg cag ttt gat gat gaa gac ctg ggg gcc ttg ctt ggc aac agc aca        2112
Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr
    690             695             700


gac cca gct gtg ttc aca gac ctg gca tcc gtc gac aac tcc gag ttt        2160
Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe
705             710             715             720


cag cag ctg ctg aac cag ggc ata cct gtg gcc ccc cac aca act gag        2208
Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu
            725             730             735


ccc atg ctg atg gag tac cct gag gct ata act cgc cta gtg aca ggg        2256
Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly
            740             745             750


gcc cag agg ccc ccc gac cca gct cct gct cca ctg ggg gcc ccg ggg        2304
Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
            755             760             765
```

```
ctc ccc aat ggc ctc ctt tca gga gat gaa gac ttc tcc tcc att gcg        2352
Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
    770             775             780


gac atg gac ttc tca gcc ctg ctg agt cag atc agc tcc taa                2394
Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser  *
785             790             795
```

<210> 14
<211> 797
<212> PRT
<213> Aequorea victoria and human

<400> 14

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Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5               10              15
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
            20              25              30
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
            35              40              45
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
        50              55              60
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65              70              75              80
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85              90              95
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
            100             105             110
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115             120             125
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
        130             135             140
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145             150             155             160
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
            165             170             175
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
        180             185             190
```

50

Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
            195   200   205

Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
            210   215   220

Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225   230   235   240

Gly Leu Arg Ser Arg Ala Met Asp Glu Leu Phe Pro Leu Ile Phe Pro
                245   250   255

Ala Glu Pro Ala Gln Ala Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln
                260   265   270

Pro Lys Gln Arg Gly Met Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser
            275   280   285

Ala Gly Ser Ile Pro Gly Glu Arg Ser Thr Asp Thr Thr Lys Thr His
            290   295   300

Pro Thr Ile Lys Ile Asn Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile
305   310   315   320

Ser Leu Val Thr Lys Asp Pro Pro His Arg Pro His Pro His Glu Leu
                325   330   335

Val Gly Lys Asp Cys Arg Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro
                340   345   350

Asp Arg Cys Ile His Ser Phe Gln Asn Leu Gly Ile Gln Cys Val Lys
            355   360   365

Lys Arg Asp Leu Glu Gln Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn
            370   375   380

Asn Pro Phe Gln Val Pro Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu
385   390   395   400

Asn Ala Val Arg Leu Cys Phe Gln Val Thr Val Arg Asp Pro Ser Gly
                405   410   415

Arg Pro Leu Arg Leu Pro Pro Val Leu Pro His Pro Ile Phe Asp Asn
                420   425   430

Arg Ala Pro Asn Thr Ala Glu Leu Lys Ile Cys Arg Val Asn Arg Asn
                435   440   445

Ser Gly Ser Cys Leu Gly Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys
            450   455   460

Val Gln Lys Glu Asp Ile Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu
465   470   475   480

Ala Arg Gly Ser Phe Ser Gln Ala Asp Val His Arg Gln Val Ala Ile
                485   490   495

Val Phe Arg Thr Pro Pro Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val
            500   505   510

```
Arg Val Ser Met Gln Leu Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu
        515             520             525

Pro Met Glu Phe Gln Tyr Leu Pro Asp Thr Asp Asp Arg His Arg Ile
        530             535             540

Glu Glu Lys Arg Lys Arg Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys
545             550             555             560

Lys Ser Pro Phe Ser Gly Pro Thr Asp Pro Arg Pro Pro Arg Arg
                565             570             575

Ile Ala Val Pro Ser Arg Ser Ser Ala Ser Val Pro Lys Pro Ala Pro
            580             585             590

Gln Pro Tyr Pro Phe Thr Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu
            595             600             605

Phe Pro Thr Met Val Phe Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala
        610             615             620

Leu Ala Pro Ala Pro Pro Gln Val Leu Pro Gln Ala Pro Ala Pro Ala
625             630             635             640

Pro Ala Pro Ala Met Val Ser Ala Leu Ala Gln Ala Pro Ala Pro Val
                645             650             655

Pro Val Leu Ala Pro Gly Pro Pro Gln Ala Val Ala Pro Pro Ala Pro
            660             665             670

Lys Pro Thr Gln Ala Gly Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln
            675             680             685

Leu Gln Phe Asp Asp Glu Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr
        690             695             700

Asp Pro Ala Val Phe Thr Asp Leu Ala Ser Val Asp Asn Ser Glu Phe
705             710             715             720

Gln Gln Leu Leu Asn Gln Gly Ile Pro Val Ala Pro His Thr Thr Glu
                725             730             735

Pro Met Leu Met Glu Tyr Pro Glu Ala Ile Thr Arg Leu Val Thr Gly
            740             745             750

Ala Gln Arg Pro Pro Asp Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly
            755             760             765

Leu Pro Asn Gly Leu Leu Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala
        770             775             780

Asp Met Asp Phe Ser Ala Leu Leu Ser Gln Ile Ser Ser
785             790             795
```

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<210> 15
<211> 2394
<212> DNA
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<213> Aequorea victoria and human

<220>
<221> CDS
<222> (1)...(2394)

<400> 15

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atg gac gaa ctg ttc ccc ctc atc ttc ccg gca gag cca gcc cag gcc      48
Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1               5                   10                  15


tct ggc ccc tat gtg gag atc att gag cag ccc aag cag cgg ggc atg      96
Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met
            20                  25                  30


cgc ttc cgc tac aag tgc gag ggg cgc tcc gcg ggc agc atc cca ggc     144
Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
            35                  40                  45


gag agg agc aca gat acc acc aag acc cac ccc acc atc aag atc aat     192
Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
        50                  55                  60


ggc tac aca gga cca ggg aca gtg cgc atc tcc ctg gtc acc aag gac     240
Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp
65                  70                  75                  80


cct cct cac cgg cct cac ccc cac gag ctt gta gga aag gac tgc cgg     288
Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
                85                  90                  95


gat ggc ttc tat gag gct gag ctc tgc ccg gac cgc tgc atc cac agt     336
Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
            100                 105                 110


ttc cag aac ctg gga atc cag tgt gtg aag aag cgg gac ctg gag cag     384
Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
            115                 120                 125


gct atc agt cag cgc atc cag acc aac aac aac ccc ttc caa gtt cct     432
```

```
Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
    130                 135                 140


ata gaa gag cag cgt ggg gac tac gac ctg aat gct gtg cgg ctc tgc        480
Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145                 150                 155                 160


ttc cag gtg aca gtg cgg gac cca tca ggc agg ccc ctc cgc ctg ccg        528
Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
                165                 170                 175


cct gtc ctt cct cat ccc atc ttt gac aat cgt gcc ccc aac act gcc        576
Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
                180                 185                 190


gag ctc aag atc tgc cga gtg aac cga aac tct ggc agc tgc ctc ggt        624
Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
                195                 200                 205


ggg gat gag atc ttc cta ctg tgt gac aag gtg cag aaa gag gac att        672
Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
    210                 215                 220


gag gtg tat ttc acg gga cca ggc tgg gag gcc cga ggc tcc ttt tcg        720
Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
225                 230                 235                 240


caa gct gat gtg cac cga caa gtg gcc att gtg ttc cgg acc cct ccc        768
Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
                245                 250                 255


tac gca gac ccc agc ctg cag gct cct gtg cgt gtc tcc atg cag ctg        816
Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
                260                 265                 270


cgg cgg cct tcc gac cgg gag ctc agt gag ccc atg gaa ttc cag tac        864
Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
                275                 280                 285


ctg cca gat aca gac gat cgt cac cgg att gag gag aaa cgt aaa agg        912
```

```
      Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
          290             295             300


      aca tat gag acc ttc aag agc atc atg aag aag agt cct ttc agc gga      960
      Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
      305             310             315             320


      ccc acc gac ccc cgg cct cca cct cga cgc att gct gtg cct tcc cgc     1008
      Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
                      325             330             335


      agc tca gct tct gtc ccc aag cca gca ccc cag ccc tat ccc ttt acg     1056
      Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
                  340             345             350


      tca tcc ctg agc acc atc aac tat gat gag ttt ccc acc atg gtg ttt     1104
      Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
                  355             360             365


      cct tct ggg cag atc agc cag gcc tcg gcc ttg gcc ccg gcc cct ccc     1152
      Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
          370             375             380


      caa gtc ctg ccc cag gct cca gcc cct gcc cct gct cca gcc atg gta     1200
      Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
      385             390             395             400


      tca gct ctg gcc cag gcc cca gcc cct gtc cca gtc cta gcc cca ggc     1248
      Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
                      405             410             415


      cct cct cag gct gtg gcc cca cct gcc ccc aag ccc acc cag gct ggg     1296
      Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
                  420             425             430


      gaa gga acg ctg tca gag gcc ctg ctg cag ctg cag ttt gat gat gaa     1344
      Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
                  435             440             445


      gac ctg ggg gcc ttg ctt ggc aac agc aca gac cca gct gtg ttc aca     1392
```

```
      Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
          450             455             460


gac ctg gca tcc gtc gac aac tcc gag ttt cag cag ctg ctg aac cag    1440
Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
465             470             475             480


ggc ata cct gtg gcc ccc cac aca act gag ccc atg ctg atg gag tac    1488
Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
                485             490             495


cct gag gct ata act cgc cta gtg aca ggg gcc cag agg ccc ccc gac    1536
Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
                500             505             510


cca gct cct gct cca ctg ggg gcc ccg ggg ctc ccc aat ggc ctc ctt    1584
Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
                515             520             525


tca gga gat gaa gac ttc tcc tcc att gcg gac atg gac ttc tca gcc    1632
Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
          530             535             540


ctg ctg agt cag atc agc tcc ttg gat cca ccg gtc gcc acc atg gtg    1680
Leu Leu Ser Gln Ile Ser Ser Leu Asp Pro Pro Val Ala Thr Met Val
545             550             555             560


agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg gtc gag    1728
Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu
                565             570             575


ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc gag ggc    1776
Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly
                580             585             590


gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc tgc acc    1824
Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr
          595             600             605


acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc ctg acc    1872
```

```
                Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr
                        610             615             620


tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag cag cac          1920
Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His
625             630             635             640


gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag cgc acc          1968
Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr
                645             650             655


atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag gtg aag          2016
Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys
                660             665             670


ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc atc gac          2064
Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp
                675             680             685


ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac aac tac          2112
Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr
                690             695             700


aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac ggc atc          2160
Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile
705             710             715             720


aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc gtg cag          2208
Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln
                725             730             735


ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc ccc gtg          2256
Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val
                740             745             750


ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg agc aaa          2304
Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys
                755             760             765


gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc gtg acc          2352
```

```
Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr
    770             775             780
```

```
gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag taa        2394
Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys *
785             790             795
```

<210> 16
<211> 797
<212> PRT
<213> Aequorea victoria and human

<400> 16
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Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
1               5               10              15
Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met
            20              25              30
Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
        35              40              45
Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
    50              55              60
Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp
65              70              75              80
Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
            85              90              95
Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
            100             105             110
Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
        115             120             125
Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
    130             135             140
Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
145             150             155             160
Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
            165             170             175
Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
            180             185             190
Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
        195             200             205
```

Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
        210   215   220

Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
225   230   235   240

Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
                245   250   255

Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
                260   265   270

Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
                275   280   285

Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
        290   295   300

Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
305   310   315   320

Pro Thr Asp Pro Arg Pro Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
                325   330   335

Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
                340   345   350

Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
                355   360   365

Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
        370   375   380

Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
385   390   395   400

Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
                405   410   415

Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
                420   425   430

Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
        435   440   445

Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
        450   455   460

Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
465   470   475   480

Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
                485   490   495

Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
                500   505   510

Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
                515   520   525

```
Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
    530                 535                 540
Leu Leu Ser Gln Ile Ser Ser Leu Asp Pro Pro Val Ala Thr Met Val
545                 550                 555                 560
Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu Val Glu
                565                 570                 575
Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly Glu Gly
                580                 585                 590
Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile Cys Thr
            595                 600                 605
Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr Leu Thr
    610                 615                 620
Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys Gln His
625                 630                 635                 640
Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu Arg Thr
                645                 650                 655
Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu Val Lys
                660                 665                 670
Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly Ile Asp
            675                 680                 685
Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr Asn Tyr
    690                 695                 700
Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn Gly Ile
705                 710                 715                 720
Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser Val Gln
                725                 730                 735
Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly Pro Val
                740                 745                 750
Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu Ser Lys
            755                 760                 765
Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe Val Thr
    770                 775                 780
Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys
785                 790                 795
```

<210> 17
<211> 2757
<212> DNA
<213> Aequorea victoria and human

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<220>
<221> CDS
<222> (1)...(2757)

<400> 17
atg gtg agc aag ggc gag gag ctg ttc acc ggg gtg gtg ccc atc ctg        48
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
1               5                   10                  15


gtc gag ctg gac ggc gac gta aac ggc cac aag ttc agc gtg tcc ggc        96
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
                20                  25                  30


gag ggc gag ggc gat gcc acc tac ggc aag ctg acc ctg aag ttc atc       144
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
            35                  40                  45


tgc acc acc ggc aag ctg ccc gtg ccc tgg ccc acc ctc gtg acc acc       192
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
        50                  55                  60


ctg acc tac ggc gtg cag tgc ttc agc cgc tac ccc gac cac atg aag       240
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80


cag cac gac ttc ttc aag tcc gcc atg ccc gaa ggc tac gtc cag gag       288
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95


cgc acc atc ttc ttc aag gac gac ggc aac tac aag acc cgc gcc gag       336
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
                100                 105                 110


gtg aag ttc gag ggc gac acc ctg gtg aac cgc atc gag ctg aag ggc       384
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
            115                 120                 125


atc gac ttc aag gag gac ggc aac atc ctg ggg cac aag ctg gag tac       432
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
            130                 135                 140
```

```
aac tac aac agc cac aac gtc tat atc atg gcc gac aag cag aag aac      480
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160


ggc atc aag gtg aac ttc aag atc cgc cac aac atc gag gac ggc agc      528
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175


gtg cag ctc gcc gac cac tac cag cag aac acc ccc atc ggc gac ggc      576
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
            180                 185                 190


ccc gtg ctg ctg ccc gac aac cac tac ctg agc acc cag tcc gcc ctg      624
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
            195                 200                 205


agc aaa gac ccc aac gag aag cgc gat cac atg gtc ctg ctg gag ttc      672
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
        210                 215                 220


gtg acc gcc gcc ggg atc act ctc ggc atg gac gag ctg tac aag tcc      720
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240


gga ctc aga tct cga ggc aag atg gct gac ccg gct gcg ggg ccg ccg      768
Gly Leu Arg Ser Arg Gly Lys Met Ala Asp Pro Ala Ala Gly Pro Pro
                245                 250                 255


ccg agc gag ggc gag gag agc acc gtg cgc ttc gcc cgc aaa ggc gcc      816
Pro Ser Glu Gly Glu Glu Ser Thr Val Arg Phe Ala Arg Lys Gly Ala
                260                 265                 270


ctc cgg cag aag aac gtg cat gag gtc aag aac cac aaa ttc acc gcc      864
Leu Arg Gln Lys Asn Val His Glu Val Lys Asn His Lys Phe Thr Ala
            275                 280                 285


cgc ttc ttc aag cag ccc acc ttc tgc agc cac tgc acc gac ttc atc      912
Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile
        290                 295                 300
```

```
tgg ggc ttc ggg aag cag gga ttc cag tgc caa gtt tgc tgc ttt gtg      960
Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val
305               310               315               320


gtg cac aag cgg tgc cat gaa ttt gtc aca ttc tcc tgc cct ggc gct     1008
Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala
                 325               330               335


gac aag ggt cca gcc tcc gat gac ccc cgc agc aaa cac aag ttt aag     1056
Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys
                 340               345               350


atc cac acg tac tcc agc ccc acg ttt tgt gac cac tgt ggg tca ctg     1104
Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu
                 355               360               365


ctg tat gga ctc atc cac cag ggg atg aaa tgt gac acc tgc atg atg     1152
Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met
    370               375               380


aat gtg cac aag cgc tgc gtg atg aat gtt ccc agc ctg tgt ggc acg     1200
Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr
385               390               395               400


gac cac acg gag cgc cgc ggc cgc atc tac atc cag gcc cac atc gac     1248
Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp
                 405               410               415


agg gac gtc ctc att gtc ctc gta aga gat gct aaa aac ctt gta cct     1296
Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro
                 420               425               430


atg gac ccc aat ggc ctg tca gat ccc tac gta aaa ctg aaa ctg att     1344
Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile
                 435               440               445


ccc gat ccc aaa agt gag agc aaa cag aag acc aaa acc atc aaa tgc     1392
Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys
    450               455               460
```

```
tcc ctc aac cct gag tgg aat gag aca ttt aga ttt cag ctg aaa gaa     1440
Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu
465             470             475             480

tcg gac aaa gac aga aga ctg tca gta gag att tgg gat tgg gat ttg     1488
Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu
            485             490             495

acc agc agg aat gac ttc atg gga tct ttg tcc ttt ggg att tct gaa     1536
Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu
            500             505             510

ctt cag aag gcc agt gtt gat ggc tgg ttt aag tta ctg agc cag gag     1584
Leu Gln Lys Ala Ser Val Asp Gly Trp Phe Lys Leu Leu Ser Gln Glu
            515             520             525

gaa ggc gag tac ttc aat gtg cct gtg cca cca gaa gga agt gag gcc     1632
Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala
            530             535             540

aat gaa gaa ctg cgg cag aaa ttt gag agg gcc aag atc agt cag gga     1680
Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys Ile Ser Gln Gly
545             550             555             560

acc aag gtc ccg gaa gaa aag acg acc aac act gtc tcc aaa ttt gac     1728
Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp
            565             570             575

aac aat ggc aac aga gac cgg atg aaa ctg acc gat ttt aac ttc cta     1776
Asn Asn Gly Asn Arg Asp Arg Met Lys Leu Thr Asp Phe Asn Phe Leu
            580             585             590

atg gtg ctg ggg aaa ggc agc ttt ggc aag gtc atg ctt tca gaa cga     1824
Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg
            595             600             605

aaa ggc aca gat gag ctc tat gct gtg aag atc ctg aag aag gac gtt     1872
Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val
            610             615             620
```

```
gtg atc caa gat gat gac gtg gag tgc act atg gtg gag aag cgg gtg        1920
Val Ile Gln Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val
625             630             635             640


ttg gcc ctg cct ggg aag ccg ccc ttc ctg acc cag ctc cac tcc tgc        1968
Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln Leu His Ser Cys
                645             650             655


ttc cag acc atg gac cgc ctg tac ttt gtg atg gag tac gtg aat ggg        2016
Phe Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly
                660             665             670


ggc gac ctc atg tat cac atc cag caa gtc ggc cgg ttc aag gag ccc        2064
Gly Asp Leu Met Tyr His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro
                675             680             685


cat gct gta ttt tac gct gca gaa att gcc atc ggt ctg ttc ttc tta        2112
His Ala Val Phe Tyr Ala Ala Glu Ile Ala Ile Gly Leu Phe Phe Leu
                690             695             700


cag agt aag ggc atc att tac cgt gac cta aaa ctt gac aac gtg atg        2160
Gln Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Met
705             710             715             720


ctc gat tct gag gga cac atc aag att gcc gat ttt ggc atg tgt aag        2208
Leu Asp Ser Glu Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys
                725             730             735


gaa aac atc tgg gat ggg gtg aca acc aag aca ttc tgt ggc act cca        2256
Glu Asn Ile Trp Asp Gly Val Thr Thr Lys Thr Phe Cys Gly Thr Pro
                740             745             750


gac tac atc gcc ccc gag ata att gct tat cag ccc tat ggg aag tcc        2304
Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr Gln Pro Tyr Gly Lys Ser
                755             760             765


gtg gat tgg tgg gca ttt gga gtc ctg ctg tat gaa atg ttg gct ggg        2352
Val Asp Trp Trp Ala Phe Gly Val Leu Leu Tyr Glu Met Leu Ala Gly
                770             775             780
```

```
cag gca ccc ttt gaa ggg gag gat gaa gat gaa ctc ttc caa tcc atc     2400
Gln Ala Pro Phe Glu Gly Glu Asp Glu Asp Glu Leu Phe Gln Ser Ile
785             790                 795                 800


atg gaa cac aac gta gcc tat ccc aag tct atg tcc aag gaa gct gtg     2448
Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val
                805                 810                 815


gcc atc tgc aaa ggg ctg atg acc aaa cac cca ggc aaa cgt ctg ggt     2496
Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly
            820                 825                 830


tgt gga cct gaa ggc gaa cgt gat atc aaa gag cat gca ttt ttc cgg     2544
Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg
            835                 840                 845


tat att gat tgg gag aaa ctt gaa cgc aaa gag atc cag ccc cct tat     2592
Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr
            850                 855                 860


aag cca aaa gct aga gac aag aga gac acc tcc aac ttc gac aaa gag     2640
Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu
865                 870                 875                 880


ttc acc aga cag cct gtg gaa ctg acc ccc act gat aaa ctc ttc atc     2688
Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile
                885                 890                 895


atg aac ttg gac caa aat gaa ttt gct ggc ttc tct tat act aac cca     2736
Met Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro
                900                 905                 910


gag ttt gtc att aat gtg tag                                         2757
Glu Phe Val Ile Asn Val  *
            915


        <210> 18
        <211> 918
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<212> PRT
<213> Aequorea victoria and human

<400> 18
Met Val Ser Lys Gly Glu Glu Leu Phe Thr Gly Val Val Pro Ile Leu
 1               5                  10                  15
Val Glu Leu Asp Gly Asp Val Asn Gly His Lys Phe Ser Val Ser Gly
                20                  25                  30
Glu Gly Glu Gly Asp Ala Thr Tyr Gly Lys Leu Thr Leu Lys Phe Ile
            35                  40                  45
Cys Thr Thr Gly Lys Leu Pro Val Pro Trp Pro Thr Leu Val Thr Thr
        50                  55                  60
Leu Thr Tyr Gly Val Gln Cys Phe Ser Arg Tyr Pro Asp His Met Lys
65                  70                  75                  80
Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln Glu
                85                  90                  95
Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr Arg Ala Glu
                100                 105                 110
Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu Leu Lys Gly
        115                 120                 125
Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu Glu Tyr
        130                 135                 140
Asn Tyr Asn Ser His Asn Val Tyr Ile Met Ala Asp Lys Gln Lys Asn
145                 150                 155                 160
Gly Ile Lys Val Asn Phe Lys Ile Arg His Asn Ile Glu Asp Gly Ser
                165                 170                 175
Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp Gly
                180                 185                 190
Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Thr Gln Ser Ala Leu
        195                 200                 205
Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu Glu Phe
        210                 215                 220
Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr Lys Ser
225                 230                 235                 240
Gly Leu Arg Ser Arg Gly Lys Met Ala Asp Pro Ala Ala Gly Pro Pro
                245                 250                 255
Pro Ser Glu Gly Glu Glu Ser Thr Val Arg Phe Ala Arg Lys Gly Ala
                260                 265                 270
Leu Arg Gln Lys Asn Val His Glu Val Lys Asn His Lys Phe Thr Ala
        275                 280                 285
```

Arg Phe Phe Lys Gln Pro Thr Phe Cys Ser His Cys Thr Asp Phe Ile
    290   295   300

Trp Gly Phe Gly Lys Gln Gly Phe Gln Cys Gln Val Cys Cys Phe Val
305   310   315   320

Val His Lys Arg Cys His Glu Phe Val Thr Phe Ser Cys Pro Gly Ala
            325   330   335

Asp Lys Gly Pro Ala Ser Asp Asp Pro Arg Ser Lys His Lys Phe Lys
            340   345   350

Ile His Thr Tyr Ser Ser Pro Thr Phe Cys Asp His Cys Gly Ser Leu
            355   360   365

Leu Tyr Gly Leu Ile His Gln Gly Met Lys Cys Asp Thr Cys Met Met
    370   375   380

Asn Val His Lys Arg Cys Val Met Asn Val Pro Ser Leu Cys Gly Thr
385   390   395   400

Asp His Thr Glu Arg Arg Gly Arg Ile Tyr Ile Gln Ala His Ile Asp
            405   410   415

Arg Asp Val Leu Ile Val Leu Val Arg Asp Ala Lys Asn Leu Val Pro
            420   425   430

Met Asp Pro Asn Gly Leu Ser Asp Pro Tyr Val Lys Leu Lys Leu Ile
            435   440   445

Pro Asp Pro Lys Ser Glu Ser Lys Gln Lys Thr Lys Thr Ile Lys Cys
            450   455   460

Ser Leu Asn Pro Glu Trp Asn Glu Thr Phe Arg Phe Gln Leu Lys Glu
465   470   475   480

Ser Asp Lys Asp Arg Arg Leu Ser Val Glu Ile Trp Asp Trp Asp Leu
            485   490   495

Thr Ser Arg Asn Asp Phe Met Gly Ser Leu Ser Phe Gly Ile Ser Glu
            500   505   510

Leu Gln Lys Ala Ser Val Asp Gly Trp Phe Lys Leu Leu Ser Gln Glu
            515   520   525

Glu Gly Glu Tyr Phe Asn Val Pro Val Pro Pro Glu Gly Ser Glu Ala
    530   535   540

Asn Glu Glu Leu Arg Gln Lys Phe Glu Arg Ala Lys Ile Ser Gln Gly
545   550   555   560

Thr Lys Val Pro Glu Glu Lys Thr Thr Asn Thr Val Ser Lys Phe Asp
            565   570   575

Asn Asn Gly Asn Arg Asp Arg Met Lys Leu Thr Asp Phe Asn Phe Leu
            580   585   590

Met Val Leu Gly Lys Gly Ser Phe Gly Lys Val Met Leu Ser Glu Arg
    595   600   605

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Lys Gly Thr Asp Glu Leu Tyr Ala Val Lys Ile Leu Lys Lys Asp Val
        610             615             620
Val Ile Gln Asp Asp Asp Val Glu Cys Thr Met Val Glu Lys Arg Val
625             630             635             640
Leu Ala Leu Pro Gly Lys Pro Pro Phe Leu Thr Gln Leu His Ser Cys
                645             650             655
Phe Gln Thr Met Asp Arg Leu Tyr Phe Val Met Glu Tyr Val Asn Gly
                660             665             670
Gly Asp Leu Met Tyr His Ile Gln Gln Val Gly Arg Phe Lys Glu Pro
            675             680             685
His Ala Val Phe Tyr Ala Ala Glu Ile Ala Ile Gly Leu Phe Phe Leu
        690             695             700
Gln Ser Lys Gly Ile Ile Tyr Arg Asp Leu Lys Leu Asp Asn Val Met
705             710             715             720
Leu Asp Ser Glu Gly His Ile Lys Ile Ala Asp Phe Gly Met Cys Lys
            725             730             735
Glu Asn Ile Trp Asp Gly Val Thr Thr Lys Thr Phe Cys Gly Thr Pro
            740             745             750
Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr Gln Pro Tyr Gly Lys Ser
            755             760             765
Val Asp Trp Trp Ala Phe Gly Val Leu Leu Tyr Glu Met Leu Ala Gly
        770             775             780
Gln Ala Pro Phe Glu Gly Glu Asp Glu Asp Glu Leu Phe Gln Ser Ile
785             790             795             800
Met Glu His Asn Val Ala Tyr Pro Lys Ser Met Ser Lys Glu Ala Val
            805             810             815
Ala Ile Cys Lys Gly Leu Met Thr Lys His Pro Gly Lys Arg Leu Gly
            820             825             830
Cys Gly Pro Glu Gly Glu Arg Asp Ile Lys Glu His Ala Phe Phe Arg
            835             840             845
Tyr Ile Asp Trp Glu Lys Leu Glu Arg Lys Glu Ile Gln Pro Pro Tyr
    850             855             860
Lys Pro Lys Ala Arg Asp Lys Arg Asp Thr Ser Asn Phe Asp Lys Glu
865             870             875             880
Phe Thr Arg Gln Pro Val Glu Leu Thr Pro Thr Asp Lys Leu Phe Ile
                885             890             895
Met Asn Leu Asp Gln Asn Glu Phe Ala Gly Phe Ser Tyr Thr Asn Pro
                900             905             910
Glu Phe Val Ile Asn Val
                915
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